



Edgewood Area - Aberdeen Proving Ground, Maryland 21010-5424

U.S. Army Soldier and Biological Chemical Command

McNamara Life Sciences Research Facility

In September 1997, our Bernard McNamara Life Sciences Research Facility was dedicated to Dr. Bernard P. McNamara, a world-renowned toxicologist and an exceptional human being, whose Federal career spanned 39 years.

The Edgewood Chemical Biological Center (ECBC) was originally established as Edgewood Arsenal in 1917 to develop countermeasures to the German use of chlorine gas in World War I. This installation became a center of excellence in toxicology, with special emphasis on inhalation. It was here, under the direction of Dr. Silver and Dr. McNamara, that some of the principles of inhalation toxicology were developed.



Dr. McNamara served as Aerosol Branch Chief, Toxicology Division, and then as Chief, Toxicology Division. A founding member of the Society of Toxicology, he published extensively in the field of inhalation toxicology and served on many prestigious scientific committees, including the National Academy of Sciences, National Research Council Committee on Toxicology, National Cancer Institute, and Bioassay Advisory Group. In addition to his inhalation toxicology expertise, he was also recognized for his contributions in cardiovascular, central nervous system, dermal, and ocular toxicology.

This building is the realization of Dr. McNamara's dream to gather all life scientists into a modern facility for cutting-edge research performed in compliance with Good Laboratory Practices. It is a sign of vitality and growth in the scientific underpinning of our national defense. Constructed at a cost of over \$30 million (with almost 120,000 square feet of lab and administrative space), it is designed for state-of-the-art research and toxicological testing; supports our leadership position in animal welfare; and meets state, federal, and Army environmental regulations for the containment and discharge of hazardous materials. This major Army construction project provides ECBC with a secure facility to perform life science studies in compliance with the safety, security, and surety requirements of the regulatory agencies.

A three-story building located adjacent to existing research facilities, the first floor contains shipping and receiving docks, mechanical and utility rooms, and electronics and necropsy labs. The second floor consists of a percutaneous suite, subchronic and acute inhalation suites, an electrophysiology lab, and a Biosafety Level 3 (BL-3) microbiology suite. The third floor contains analytical/clinical chemistry, physiology, enzymology, teratology, biochemistry, microbiology (BL-2), pathology, molecular and cellular biology, electrophysiology, and aquatic toxicology labs as well as a surgical suite. Extensive engineering controls are designed into the facility to ensure worker safety and provide a clean environment. All labs are under negative pressure (to contain hazardous materials), all gases are processed through redundant filter systems, all effluents are contained during operations, and spill containment is built into the facility. In September 2001, our BL-3 facility (including BL-2 and BL-3 labs) opened, with state-of-the-art capabilities in the areas of isolation, identification, preparation, characterization, and testing of bacterial, viral, and fungal microorganisms. Among the largest of its type, this facility enhances military biological capabilities and, at the same time, supports research and development needs from private industry.

Life Science researchers in Research and Technology Directorate occupy the McNamara Building and are responsible for planning, performing, and consulting on basic and applied research for CB defense materials in the areas of environmental science, pharmacology, toxicology, microbiology, biotechnology, and related life sciences as well as research and application of alternatives to animal testing. Investigators can assess the hazards associated with chemical-based military items in this facility or identify the microbiological contents of samples collected from on-site investigations. Results of these analyses (low level chemical agent inhalation studies and biological agent ID testing) will provide invaluable information on risks to (1) soldiers during training or while in the field, (2) manufacturers, (3) depot handlers, (4) the environment, and (5) the nation and local communities. Our Life Science researchers also provide management of veterinary health and animal husbandry programs and policies, including facility and equipment upgrades, and serve as expert consultants on animal use issues for the Institutional Animal Care and Use Committee (IACUC).



For additional information, please E-mail research.technology@sbccom.apgea.army.mil.

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